

Serial No. 10/091,515
Docket No. YOR920010496US1 (YOR.319)

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REMARKS

Entry of this Request for Reconsideration is proper under 37 CFR §1.116, since no new claims or issues are raised and Applicants respond on the record to the new rejection based on newly-cited Gunn for claims 1 and 48 prior to proceeding to Appeal.

Claims 1-48 are all the claims presently pending in the application.

It is noted that Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 1-47 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,563,185 to Modell et al. Claims 1 and 48 stand rejected under 35 U.S.C. §102(e) as anticipated by US Patent 6,917,727 to Gunn et al.

This new rejection is respectfully traversed in the following discussion. Applicants have no additional comments on the previous rejection based on Modell prior to Appeal.

I. THE CLAIMED INVENTION

As described and as defined in, for example, independent claim 1, the claimed invention is directed to an apparatus for producing a modulated optical signal in a waveguide, and includes an antenna for communicating with the waveguide and with an externally-applied optical field and having an output port. An electrically-variable-impedance device is connected at the output port of the antenna and is capable of responding at a frequency of an externally-applied optical field and having its impedance at the optical frequency changed by an applied electrical signal.

As explained beginning at line 19 on page 2 of the specification, the present invention addresses the problem that there are no monolithically integrated optical interconnection technologies, so that each has required hybrid construction to route logic signals through a laser driver, laser, waveguide, photodiode, and transimpedance amplifier chain. Moreover, as described at lines 5-9 of page 3, there is a separate laser or modulator provided for each fiber or waveguide, thereby requiring that each line have at least one component mounted on the circuit board or chip.

In contrast, as explained beginning at line 7 of page 6, the present invention offers a number of advantages, including the capability of using a single common laser and driver circuit

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for a plurality of interconnects, thereby providing savings in chip real estate, extremely large bandwidths and near-zero latency, considerable power savings, and the capability of manufacture entirely in monolithic silicon circuitry.

Moreover, the present invention is unlike an ordinary antenna that must couple into free-space waves. Rather, the present invention, although called an "antenna", is perhaps technically better described as a "waveguide to conductor coupling", since it does not address the free-space propagation purpose.

II. THE PRIOR ART REJECTION BASED ON NEWLY-CITED GUNN

The Examiner alleges that teaches the present invention described by claims 1 and 48. Applicants submit, however, that there are elements of the claimed invention which are neither taught nor suggested by newly-cited Gunn.

As explained in the previous rejection based on Modell, although the same word "antenna" is used for both the present invention and the prior art described in Modell, they are not the same devices, although the popular word "antenna" could be used for both. The present invention would be just as properly described more technically as being a "waveguide to conductor coupling structure."

The antenna of the present invention is much more like a waveguide-to-coax adapter than like rabbit ears and would not be much use in free space.

In paragraph 4 of the Office Action, for the latest rejection based on Gunn, the Examiner points to items 440, 460 in Figure 7 as being "antennas." However, Applicants submit that these components are clearly described at lines 29-30 of column 14 as being "salicide or metalization 460, and/or ohmic contacts 440" that electrically couple the plugs 445 from voltage source 435. The purpose of this voltage source is to allow carriers to concentrate and thereby control the effective index of the strip.

Applicants submit that this control mechanism is not an antenna that satisfies the plain meaning of independent claim 1: "... an antenna for communicating with the waveguide and with an externally-applied optical field and having an output port"

Hence, Applicants submit that the rejection currently of record fails to meet the initial burden of a *prima facie* rejection, and the Examiner is respectfully requested to reconsider and

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withdraw this rejection for claims 1 and 48.

Therefore, Applicant submits that there are elements of the claimed invention that are not taught or suggested by either Moddel or newly-cited Gunn. Therefore, the Examiner is respectfully requested to withdraw these rejections.

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III. FORMAL MATTERS AND CONCLUSION

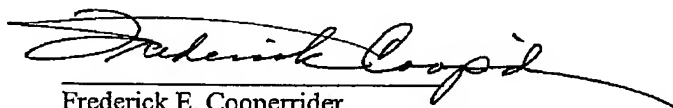
In view of the foregoing, Applicant submits that claims 1-48, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Assignee's Deposit Account No. 50-0510.

Respectfully Submitted,


Date: 11/6/06


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CERTIFICATION OF TRANSMISSION

I certify that I transmitted via facsimile to (571) 273-8300 this Amendment under 37 CFR §1.116 to Examiner S. Song on November 6, 2006.


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